

Kansas

Special Emphasis Report: Fall Injuries among Older Adults 2005-2014

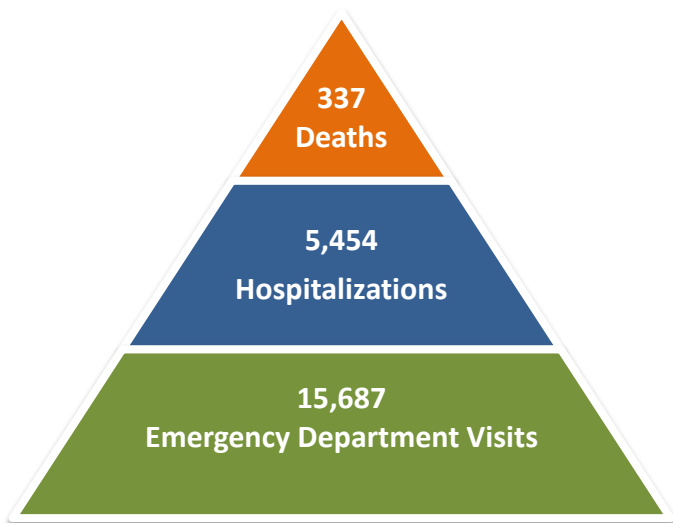
A GROWING CONCERN

Unintentional falls among older adults are a leading cause of fatal and nonfatal injury in the U.S. and Kansas. Hospital costs associated with injuries sustained by falls account for a substantial share of health care dollars spent on injury-related care.

In 2014, 337 Kansan residents ages 65 and older died and over 21,478 fall injuries were treated at hospitals and emergency departments (Figure 1).

This report provides recent data on unintentional fall injuries and deaths among Kansas residents ages 65 and older. It includes information about groups with the highest rates, associated costs and current prevention strategies and activities in Kansas.

FIGURE 1. Burden of Fall Injuries among Residents Ages 65 and older— Kansas, 2014



QUICK FACTS



Residents ages 65 and older account for **88% of all fall deaths** and 74% of nonfatal fall hospitalizations in Kansas.



Falls are the **leading cause of traumatic brain injury (TBI)** in Kansas residents ages 65 and older, accounting for 62% of TBI deaths and 79% of TBI hospitalizations. **17% of fall deaths** and hospitalizations among older adults were associated with a TBI.



Projected lifetime costs associated with fall injuries in 2014 among Kansas residents ages 65 and older are estimated to be \$510,322,000.



Each week, there are 301 emergency department visits among residents ages 65 and older, 104 hospitalizations, **and 6 deaths due to fall injuries in** Kansas.



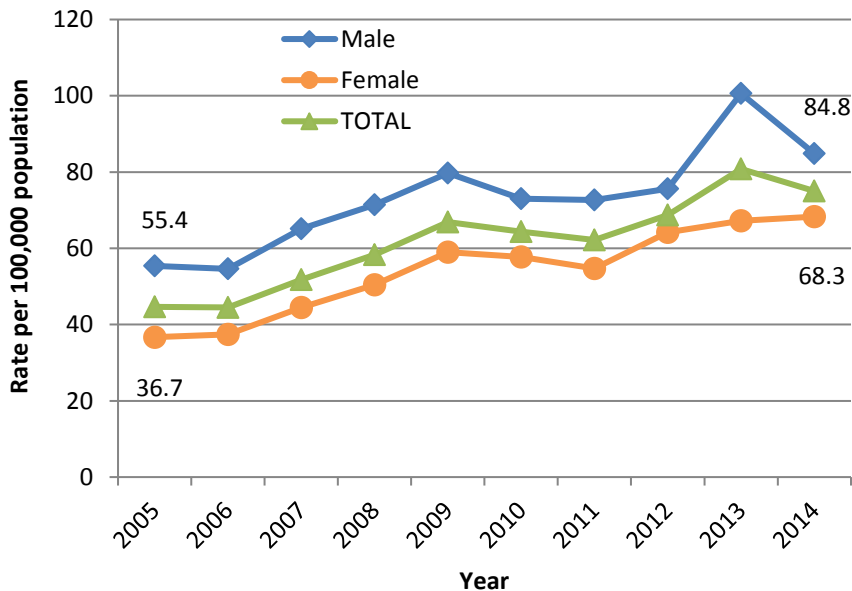
In 2014, 72% fall deaths among this age group **occurred in the home**, while 21% occurred in a residential facility such as a nursing home. The location wasn't known for 7%.

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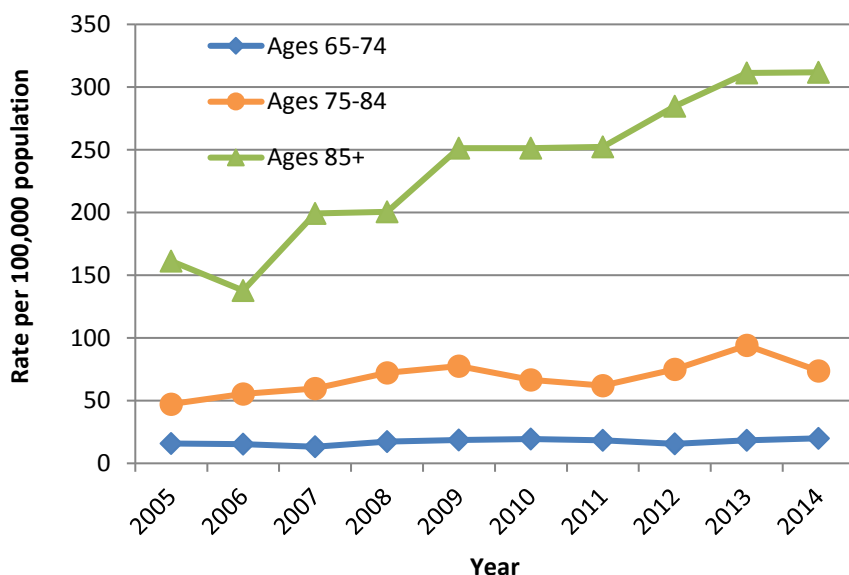
FALL DEATHS

FIGURE 2. Age-adjusted Rate of Fall Deaths by Sex, Ages 65 and older— Kansas, 2005-2014



- From 2005 to 2014, the age-adjusted rate of fall deaths increased from 44.6 per 100,000 in 2005 to 75.0 per 100,000 in 2014.
- Fall death rates increased among both males and females during this time period.
- In 2014, the fall death rate in males was approximately 16.5% higher than in females.

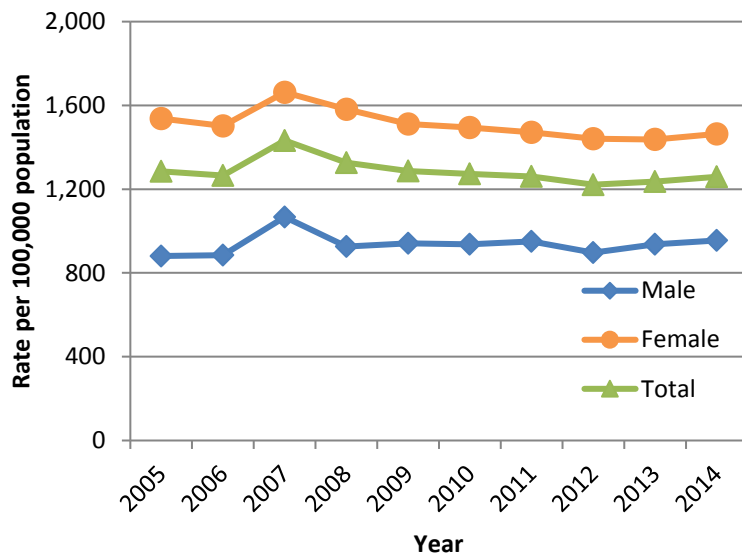
FIGURE 3. Age-specific Rate of Fall Deaths by Age Group, Ages 65 and older— Kansas, 2005-2014



- Fall death rates increased among all three age groups.
- The highest increase was among persons ages 85 and older.
- Rates for persons ages 85 and older increased, from 161.3 per 100,000 in 2005 to 311.8 per 100,000 in 2014.

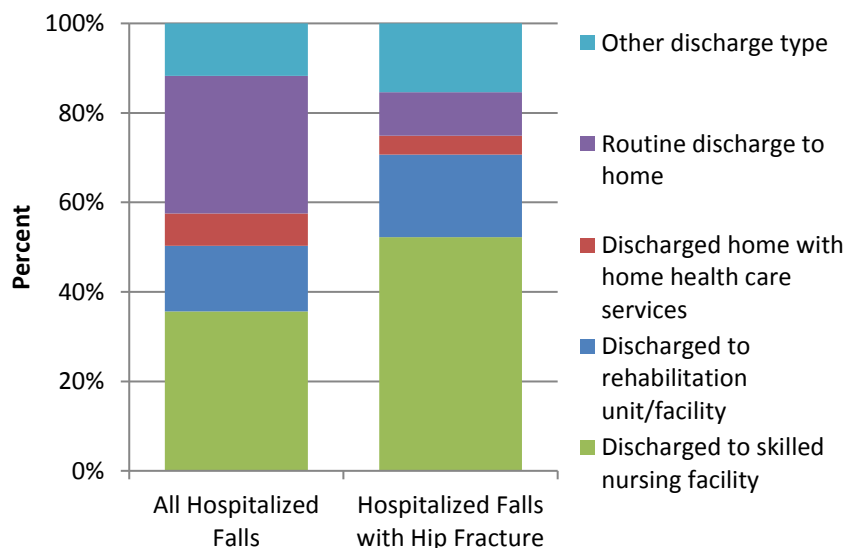
NONFATAL FALL HOSPITALIZATIONS

FIGURE 4. Age-adjusted Rate of Nonfatal Fall Hospitalizations by Sex, Ages 65 and older— Kansas. 2005-2014



- Nonfatal fall hospitalizations have remained relatively stable. From 2005 through 2007 rates increased slightly, but have steadily declined from 2008 through 2012. There was a slight increase again in 2013 and 2014.
- In 2014, rates among females were approximately 1.5 times that of males.

FIGURE 5. Percent of Nonfatal Fall Hospitalizations by Discharge Disposition, Ages 65 and older— Kansas, 2014



- 36% of all fall hospitalizations were discharged to a skilled nursing facility.
- Among falls resulting in a hip fracture, 52% were discharged to a skilled nursing facility and 19% discharged to a rehabilitation facility.¹
- Among those with a hip fracture, only 10% had a routine discharge to home and 4% were discharged home with home health services.

¹Rehabilitation includes inpatient hospital rehab units as well as other outside facilities.

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DEMOGRAPHIC DATA

TABLE 1. Number and Rate of Fall Deaths and Nonfatal Fall Hospitalizations and Emergency Department (ED) Visits, Ages 65 and older— Kansas, 2014

	Fall Deaths		Nonfatal Fall Hospitalizations and Emergency Department (ED) Visits			
	Number of Deaths	Death Rate per 100,000 ²	Number of Hospitalizations	Nonfatal Hospitalization Rate per 100,000 ²	Number of ED Visits	Nonfatal ED Visit Rate per 100,000 ²
TOTAL	337	75.0	5,454	1,258.5	15,687	3,668.5
Sex						
Male	146	84.8	1,657	955.5	5,226	2,980.3
Female	191	68.3	3,797	1,464.1	10,461	4,191.5
Age Group						
Ages 65-74	45	19.9	1,167	517.3	4,823	2,138.0
Ages 75-84	93	73.8	1,898	1,505.8	5,257	4,170.6
Ages 85+	199	311.8	2,389	3,742.9	5,607	8,784.7
Race/Ethnicity*						
White, NH ³	322	77.1	4,879	1,220.7	14,193	3,612.3
Black, NH	7	**	85	568.0	452	3,020.8
Hispanic	6	**	61	510.1	242	1,920.6
Other/Multiracial, NH	**	**	90	1,431.4	136	1,926.1
<p>* Other/Multiracial, non-Hispanic does not include cases missing on race or ethnicity. 339 hospitalized discharges have missing data on race/ethnicity. 664 ED visits have missing data on race/ethnicity.</p> <p>** Suppressed due to small counts.</p> <p>²Rates are age-adjusted except for rates by age group.</p> <p>³non-Hispanic</p>						

- Males had a higher rate of fall deaths than females (84.8 per 100,000 and 68.3 per 100,000, respectively).
- Females had higher rates for nonfatal hospitalizations and ED visits.
- Persons ages 85 and older had the highest rates of fatal and nonfatal fall injuries. This age group had over 15 times the rate of death compared to those aged 65-74 years.
- White, non-Hispanic residents had the highest rates of fall deaths and Other/Multiracial, non-Hispanic residents had the lowest.
- Other/Multiracial, non-Hispanic residents had the highest rates of fall hospitalizations and Hispanic residents had the lowest.
- White, non-Hispanic residents had the highest rates of fall ED visits and Other/Multiracial, non-Hispanic residents had the lowest.

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PROJECTED LIFETIME COSTS

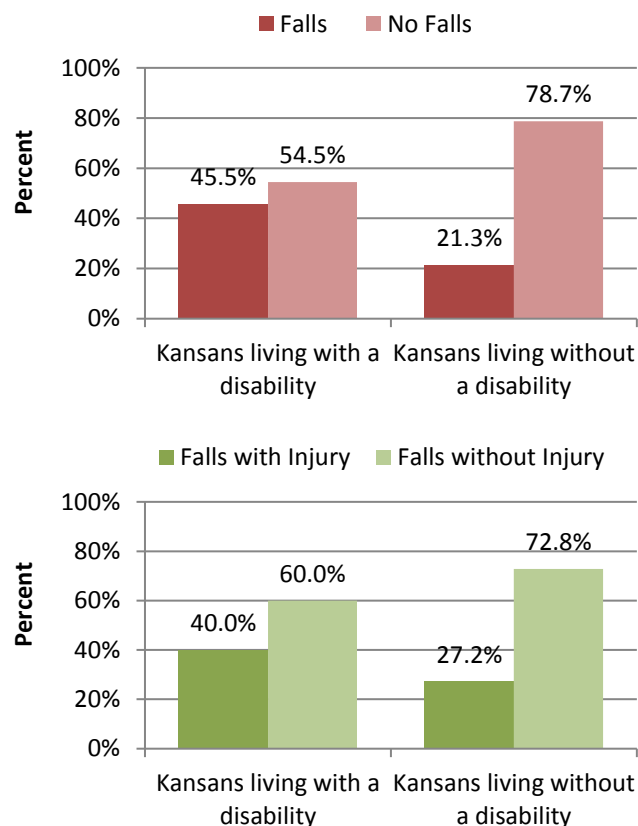
Lifetime costs⁴ associated with unintentional fall injuries in 2014 among Kansas residents ages 65 and older are estimated to be over \$510,322,000. Most of these costs were associated with injuries requiring hospitalizations.

	Number of Injuries	Medical Cost	Work Loss Cost	Combined Cost
Deaths	337	\$9,208,000	\$39,311,000	\$48,520,000
Hospitalizations	5,454	\$224,111,000	\$164,538,000	\$388,649,000
ED Visits	15,687	\$50,977,000	\$22,177,000	\$73,153,000
TOTAL	21,478	\$284,296,000	\$226,026,000	\$510,322,000

SURVEY DATA

- The Behavioral Risk Factor Surveillance Survey (BRFSS) is a statewide phone survey of community dwelling (i.e. non-institutionalized) Kansas adults. It provides self-reported data on a variety of topics, including falls, fall-related injuries, and medical conditions.
- In 2014, approximately 126,715 Kansas adults ages 65 years and older had fallen and 34.2% of those who fell had a fall-related injury in the past 12 months.
- Older Kansas adults who reported the following conditions were significantly *more likely*⁵ to report falls and fall-related injuries in the past 12 months:
 - poor mental health/depression
 - chronic obstructive pulmonary disease (COPD)
 - asthma
 - no exercise
 - disability⁶
- Older adults who reported a physical, cognitive and/or emotional disability⁶ had particularly high fall rates, with an estimated 45.5% reporting having fallen and 40% reporting fall-related injuries in the past 12 months.

FIGURE 6. Self-Reported Falls and Fall Injuries in the Past 12 Months, Ages 65 and older—Kansas, 2014



⁴Costs were calculated using the CDC's WISQARS Cost Module application which provides cost estimates for medical and work loss for injury-related deaths, hospitalizations, and emergency department visits. <http://www.cdc.gov/injury/wisqars/>.

⁵These conditions are statistically significant at the (P<.05 level). However, causality shouldn't be assumed. Selected chronic health conditions: respondents reported "Yes" to **EVER** having been diagnosed with: Diabetes; Asthma; Stroke; Cancer; Depression; Chronic obstructive pulmonary disease (COPD); Coronary artery disease (CAD)/Angina or with Myocardial infarction. Poor mental health includes persons who reported experiencing 14+ days of poor mental health in the past month. Respondents are asked their height and weight to calculate BMI. Obesity is defined as a BMI greater than or equal to 30.0. Exercise is defined as respondents reporting "No" to **ANY** leisure-time physical activity.

⁶Disability is defined as having one or more of the following conditions for at least one year; (1) impairment or health problem that limited activities or caused cognitive difficulties, (2) used special equipment or required help from others to get around.



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FALL PREVENTION RESOURCES

STEADI (Stopping Elderly Accidents Deaths & Injuries): The Centers for Disease Control and Prevention (CDC) is working to make fall prevention a routine part of clinical care. STEADI uses established clinical guidelines and effective strategies to help primary care providers address their older patients' fall risk and identify modifiable risk factors:

www.cdc.gov/steadi.

PREVENTION ACTIVITIES IN KANSAS

KANSAS CONDUCTS STEPPING ON WORKSHOPS ON A REGULAR BASIS. GO TO WWW.TOOLSFORBETTERHEALTHKS.ORG TO FIND A CLASS IN YOUR AREA.

Stepping On is a [high-level, evidence-based program](#) proven to reduce falls and build confidence in older people. A community-based, small-group workshop, *Stepping On* was developed in Australia and tested in a randomized trial where it demonstrated a 31% reduction in falls. Wisconsin developed an American version of *Stepping On* with support from the Centers for Disease Control and Prevention (CDC) that has been tested in the United States and shown to achieve a 50% reduction in falls. Independent researchers have concluded that the success of *Stepping On* is attributable to Program Leaders' adherence to the program's [Key Elements](#).

KDHE partners with the Kansas State Alliance of YMCAs to offer Enhance Fitness, an evidence-based group exercise program designed by Senior Services to help older adults at all levels of fitness become more active, energized and empowered to sustain independent lives. During Enhance Fitness exercise sessions trained and certified instructors lead participants through a brief warmup, several minutes of aerobic exercise, strength training, stretching, balance exercises and a brief cool-down. These one-hour classes are designed to be fun, relaxed and provide opportunities for participants to socialize. Classes are currently offered at the following YMCA branches: Kansas City, McPherson, Salina and Wichita. Classes are scheduled to begin at the Garden City and Hutchinson branches in 2016.

For more information visit <http://www.projectenhance.org/enhancefitness.aspx> or contact Lianna Bodlak Director of Medical Based Programs at the Greater Wichita YMCA. lianna.bodlak@ymcawichita.org
316-219-9622 ext 5578

DATA SOURCES

Death: 2005-2014 Kansas Vital Statistics, Bureau of Epidemiology and Public Health Informatics, KDHE. HD Data: 2005-2014 Kansas Hospital Discharge Database, Kansas Hospital Association. ED Data: 2014 Kansas Hospital Emergency Department Database, Kansas Hospital Association. BRFSS: 2014 Kansas Behavioral Risk Factor Surveillance System. Kansas Department of Health and Environment, Bureau of Health Promotion. WISQARS: Centers for Disease Control and Prevention, National Center for Injury Prevention and Control. Web-based Injury Statistics Query and Reporting System (WISQARS) [online]. (2005) [2016 Sept. 13]. Available from URL: www.cdc.gov/injury/wisqars